A STUDY TO ASSESS THE EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION TECHNIQUE ON THE LEVEL OF PAIN AND FATIGUE AMONG CANCER PATIENTS RECEIVING CHEMOTHERAPY AT ASHWIN HOSPITAL, COIMBATORE.

By

Reg. No:301411106

A DISSERTATION SUBMITTED TO THE TAMILNADU Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE DEGREE MASTER OF SCIENCE IN NURSING.

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CHAPTER-I

INTRODUCTION

“We can. I can.”

-world cancer day theme-2016

WHO stated that health is a complete physical mental and social wellbeing and not merely the absence of disease or infirmity .Good health is a prerequisite to human productivity and development process. Health is vital for ethical, artistic, material and spiritual development of man. Good heath is a basic right and produces civic consciousness.

A state of poor health or imbalance in normal health is illness. Illness is sometimes another word for disease. As the world’s population rises, the chronic disease will continue to grow and the need for treatment also increases.

The health care needs of our country are ever on increase to wide-spread growth of deadly disease. Among these, cancer is a dreadful disease, has a relentless, very painful and debilitating course and if not treated properly at times results in death. Cancer was recognized in ancient times by skilled observers who gave its name from a Latin word canceri meaning crab which means it stretched out in many directions like leg of a crab (Schneider, 2009).

World Cancer Day is marked on February 4th raise the awareness of cancer and to encourage its prevention, detection and treatment with a multi-sectorial approach. “We

can, I can" is the world cancer day theme of 2016 which stress the importance of multi-sectorial approach in detection, prevention and treatment (WHO 2016).

Park (2011) stated that cancer is the second largest killer disease next to the heart disease. Cancer is increasingly becoming chronic than a terminal illness and it occurs in all strata of our society. It strikes all ages sexes, socioeconomic and cultural background. It is estimated that about 12.7 million cancer cases and 7.6 million cancer deaths are estimated to have occurred in 2010, of these 56% of the cases and 64% of the deaths occurred in the economically developing world (Glob can, 2010).

Smelters (2009) explained that cancer is a disease process that begins when abnormal cells is transferred by genetic mutation by cellular DNA and it is caused by multiple factors like environmental factors, dietary, tobacco, occupational exposure, viruses, lifestyle and suspected to have genetic predisposition.

According to Michael (2009) cancer may occur anywhere in the body like mouth, lungs, liver, colon, rectum, breast, pancreas, stomach, oesophagus, bone, kidney, uterus, etc. Lung, female breast, colorectal and stomach cancer were the most commonly diagnosed cancers, accounting for more than 40 % of all cases. The incidence of cancer sites varies in both sexes. In males lung cancer is more common, where in females, breast cancer is more common.

Cancer treatment mainly focuses on cure, control and palliation. Multiple modalities are commonly in cancer treatment. A variety of therapies, including surgery, radiation therapy, chemotherapy, biological response modifiers therapy may be used at various times throughout treatment (Lewis, 2008).

The era of modern chemotherapy began with the introduction of nitrogen mustard which has led to cure of many cancer cases. The National Cancer Institute methodically screens 50,000 compounds each year, of which a few becomes commercially available. The objective of chemotherapy is to destroy all malignant tumour cells without excessive destruction of normal cells (Black 2007).

Bram Well (2008) conducted a study regarding side effects of chemotherapy, in that the side effects of chemotherapy can be classified as acute or delayed. The acute effects include allergic reactions and dysrhythmias. The delayed effects are mucositis, hair loss, diarrhoea, nausea, vomiting, bone marrow, cognitive depression (Amy and Barbara, 2011).

Pan, et.al (2009) conducted a descriptive study to investigate these of complementary therapies and alternative medicine in controlling the side effects of chemotherapy and it was investigated that 40% of cancer patient uses complementary and alternative medicine to control the side effects of chemotherapy. Among them acupuncture, progressive muscle relaxation, transcutaneous electrical nerve stimulation ,supportive group therapy, self hypnosis ,and massage therapy are commonly used to

treat the side effects like pain, anxiety, fatigue, dyspnoea. Herbal medicines, medicinal teas, spiritual therapy, homeopathy were also included in the treatment.

Elizabeth Scott (2012) stated that progressive muscle relaxation is a great technique reducing overall tension of the entire muscles group in the body, it reduces the tension in the body and feels stress and enhances the physical and emotional health.

Progressive muscle relaxation is a technique that can interrupt the body's Fight and Flight responses and activate a normal relaxation response. It's a very simple process of tensing and releasing selected muscle groups in order to relax them and provide an overall relaxed state in the body. By tightening a muscle and then releasing, one can feel the difference between the tensed and relaxed state. This process can be adopted in managing the various physical and psychological processes.

NEED FOR THE STUDY:

Cancer is a killer disease and it imposes an unpleasant experience and the patient may face so many problems which are not only physical but also emotional, psychosocial and economic. During the initial phase's cure of certain cancers are possible. The global burden of cancer to increases largely because of the aging and growth of the world population alongside an increasing adoption of cancer causing behaviors, particularly smoking, in economically developing countries (Berg, 2011) .

Galen (2009) stated that there are 3.2 million cases of cancer in India, growing at 11 percent annually. Also it is the second biggest cause of death, around 5, 55,000 people died of cancer in 2010.Tobacco related cancers represents around 42% of male and 18% of female deaths. In men two of the most fatal cancers are oral (including lip and pharynx) lung. Cervical, stomach and breast cancers accounted for 41% of cancer deaths in women in rural and urban areas (Roberts 2011).

Jebabasingh (2011) explained that the clinical manifestation of cancer may vary and it includes any lump or swelling in the body, discharge or bleeding from the genitals or anus, persistent constipation, diarrhoea or weight loss, an increase in the size of mole or wart or change in colour , and dry cough or soreness in the throat.

Dorr (2008) described that among various treatment modalities management depends on the cancer type and how advanced it is. Treatment such as cancer can involve any of several modalities such as surgery, radiation therapy, chemotherapy, bone marrow transplantation and gene therapy. Chemotherapy becoming more acceptable modality of cancer treatment and the patients receiving this treatment experiences many side effects and the side effects vary depending on the specific agent used in the treatment .The most prevalent side effects seen in patients are 94% fatigue,80% pain (Perry 2004).

Natural remedies and alternative therapies may have some benefits for individual looking to treat chemotherapy side effects. Some of such measures include

muscle relaxation techniques, acupuncture, yoga, meditation, massage therapy, use of certain herbs (Cathy Wong, 2010).

Lee (2009) stated that progressive muscle relaxation teaches how to relax muscles through a two-step process. First, systematically tensing particular muscle groups in body and then relaxing them which bring about physiological changes in the body.

Progressive muscle relaxation therapy involves sequential tensing and relaxation of major skeletal muscle groups and aims to reduce feeling of tension, to lower perceived stress, and to induce relaxation .Progressive muscle relaxation is purposed to decrease the arousal of the autonomic and central nervous system and to increase parasympathetic activity.

A Meta analysis examined the effectiveness of relaxation among patients undergoing acute non-surgical cancer treatment including chemotherapy, radio therapy, bone marrow transplant and hyperthermia. The review concluded that clinically significant reduction in pain, anxiety, depression, hostility, blood pressure and pulse were achieved by following relaxation training (Arelena 2009).

Dan (2007) explained that progressive muscle relaxation is a technique which may seem to be difficult but with constant practise, it gets easier to perform and a person will be able to achieve a greater depth of relaxation and be able to control physiological function.

Nurses are the health care personnel spending more time with the patients than any other member of the health care team. Nurse has the responsibility to care the patients who are undergoing chemotherapy and has the responsibility to teach patient to cope with the side effects of chemotherapy for performing their activities.

The investigator from her personal experience during her clinical posting at oncology ward identified many patients experienced pain and fatigue after chemotherapy which motivated her to select the present study on effectiveness of progressive muscle relaxation technique on the level of pain, anxiety and fatigue among cancer patients receiving chemotherapy at Ashwin Hospital, Coimbatore.

STATEMENT OF THE PROBLEM

A Study to Assess The Effectiveness of Progressive Muscle Relaxation Technique on the Level of Pain and Fatigue Among Cancer Patients Receiving Chemotherapy at Ashwin Hospital, Coimbatore.

OBJECTIVES

a) To assess the level of pain and fatigue in cancer patients receiving chemotherapy.
b) To educate the technique of progressive muscle relaxation exercise in cancer patients receiving chemotherapy.
c) To re-assess the level of pain and fatigue in cancer patients receiving chemotherapy.
d) To associate the demographic variables with the level of pain and fatigue among the patients receiving chemotherapy.

HYPOTHESIS

The progressive muscle relaxation technique has a significant effect on level of pain and fatigue among cancer patients receiving chemotherapy.

OPERATIONAL DEFINITIONS

EFFECTIVENESS:

It refers to desired changes that can be brought about by progressive muscle relaxation on level of pain, fatigue in cancer patients receiving chemotherapy.

PROGRESSIVE MUSCLE RELAXATION:

It refers to relaxation technique in which the person first tenses and then relaxes the major muscle groups of the body in prefixed and systematic order usually beginning at the top of the body and progressive downward.

PAIN:

Pain refers to unpleasant sensory and emotional experience perceived by the cancer patients may be either due to cancer, its complications or complication of treatment.

FATIGUE:

Fatigue refers to persistent of weakness or tiredness among cancer patients interfering their usual function.

CANCER PATIENTS:

It refers to adult male or female individual who are clinically diagnosed to have cancer and receiving chemotherapy in hospital as inpatient.

CHEMOTHERAPY:

Chemotherapy is a systematic treatment of cancer with intra venous cytotoxic drugs to control the tumors growth.

ASSUMPTIONS:

- Cancer patients who receive chemotherapy will experience pain and fatigue.
- Practice of progressive muscle relaxation will reduce pain and fatigue among cancer patients receiving chemotherapy.

CHAPTER-II

REVIEW OF LITERATURE

A review of the literature an essential part of academic research project. The review is a careful examination of a body of literature pointing toward the answer to research question .This chapter presents a review of selected literature relevant to study. It context in which helps in developing the broad further conceptual context in which the problem fits methodology; construction of tool development of instructional module and analysis by data.

A review of literature is defined as a broad, comprehensive in depth, systematic review of scholarly publications; un published scholarly print materials, audiovisual materials and personal communications. (BT Basavanthappa ,2007)

Review of Literature is Discussed under the Following Heading

- Literature related to overall view of cancer and chemotherapy
- Literature related to health benefits of progressive muscle relaxation.
- Literature related to effectiveness of progressive muscle relaxation on reducing pain and fatigue.

Literature related to overall view of cancer and chemotherapy

Schuell et.al (2010) conducted a study in colorectal cancer patients, the result suggest a correlation between incidence rates and severity of side effects with the effectiveness of palliative chemotherapy in colorectal cancer. In a study conducted on

patients receiving chemotherapy it was found that 80% of the samples experienced the side effects of chemotherapy which included fatigue, nausea and vomiting, alopecia, sleeping problems, taste changes, diarrhoea, and constipation.

Belghteal (2007) stated that chemotherapy is capable of eliminating cancer cells from remote locations which are very far from original cancer sources. Over 50% of cancer patients receive chemotherapy as a form of their treatment .There have been numerous randomised clinical trials which have shown improvements in overall response rates, found clear survival benefits in patients undergone regular chemotherapy treatment(Jamel , 2008)

Karen.et.al(2010) stated that chemotherapy induced complication leads to poor chemotherapy adherence, impaired functional activity, utilization of health care resources , all of which substantiality increases the burden of and hinder its effectiveness.

Thao K Huynh (2014) Knowledge and management of chemotherapy-related adverse side effects, of the 92 surveys distributed, 67 were returned for analysis . The majority of patients (91%) responded that they had a good understanding of the chemotherapy. The results also highlighted opportunities for oncologist to provide patient education as well as ongoing monitoring and management of adverse side effects

Clinical journal of nursing (2014) to provide a best chemotherapy education to patients. Sixteen articles that employed various teaching methods were identified. Some

educational methods have been proven to decrease anxiety which allows patients to retain more information .Many ways can be used to provide chemotherapy education, and no method has been proven to be significantly better than the other.

American cancer society (2009) cancer is a group of disease that can cause different signs or symptoms, depending on where it is in the body. It is characterised by uncontrollable growth of cells. It can occur in all age group and in all ethnicities. It may be present in an advanced stage with no complaints or with vigorous symptoms and sometimes treatment does not guarantee cure.

International Agency for Research on cancer stated that in India about 6, 35,000 people died from cancer in 2008, representing about 8%of all estimated global cancer deaths and about 6% of all deaths in India. Tobacco is the biggest culprit causing 23% of cases in men and 15.6% in women. About 100,000 (34%) of the cancers are linked to smoking, diet, alcohol and excess weight. In total, lifestyle and environmental factors, such as where you live and the job you do, combine to cause cancer (The Cancer Research UK, 2011).

Nursing times (2012) stated cancer is the leading cause of death around the world and its incidence continues to rise .Each year 12.7 million people discover they have cancer and 7.6 million people die from the disease .There are about 200 known types of cancer and it is caused by multiple factors like environment, dietary habits, use

of tobacco, occupational exposure, viruses, genetic predisposition and also culture and lifestyle.

The Cancer Chronicle (2012) showed that 30-40% cancer deaths can be prevented and one third can be cured through early diagnosis and treatment .the treatment modalities for cancer include chemotherapy, radiation therapy, surgical interventions and biological response modifier.

Worldwide, more than 12 million individuals are newly diagnosed with cancer manually (Torpy, 2010) increases in cancer prevalence have been leading to the ever improving treatment modalities. On top of surgery and radiotherapy, the use of chemotherapy has increased along with the availability supportive treatment for its side effect management (Dohler et., al 2011).

Literatures Related to Health Benefits of Progressive Muscle Relaxation

Progressive muscle relaxation is an exercise that relaxes your mind and body by progressively tensing and relaxing muscle groups throughout your entire. Body the idea behind the technique is to learn how to sense body tenseness and how to voluntarily control it. Progressive muscle relaxation is one example of deep relaxation technique that can be used to reduce symptoms of chronic pain, nausea, vomiting, insomnia, stress and anxiety (William and Long, 2009).

Oncology nursing society (2014) states that Progressive muscle relaxation is a technique of alternately tensing and relaxing muscle group in sequences throughout the body. When going through muscle group, individuals can start with the head and neck progress to feet on vice versa .Similarly, individuals may do one side of the body at a time , or both sides at the same time. Progressive muscle relaxation has been examined for its effectiveness in patients with cancer for managing anxiety, fatigue and pain.

A population based study carried out in the USA of 4000 cancer survivors who were followed up 10 to 24 months after their diagnosis found that 43 percent used some form of relaxation therapy (Nova Cancer Society, 2010).

Muthulakshmi P and Rajalakshmi B (2012) explained that progressive muscle relaxation is a systematic technique for achieving a deep state of relaxation and the health benefits of relaxation includes decreasing heart rate and breathing rate, lowering of blood pressure, improving concentration, reduction of stress, nausea and vomiting and pain perception, increasing blood flow throughout body and increases the sense of control over emotions and moods.

Tressy (2012) described the Progressive muscle relaxation is effective in reducing pain and anxiety among cancer patients and it also helps in reducing sleep problems during hospitalization like delayed sleep on set, frequent awakening, restlessness and day time sleep among patients who are admitted in hospitals (Francis et.al 2012)

Siva and Annamma P (2012) stated that Progressive muscle relaxation and breathing exercise are effective in promoting psychological well being and sleep among elderly. Progressive muscle relaxation helped to relieve anxiety and improve quality of life by bringing about physical relaxation, calmness of mind and decrease cortisol level which is thought to relieve the anxiety in patients

Julie Suhr (2010) concluded that the persons who practiced progressive muscle relaxation had a decrease in psychiatric and behavioural disturbances as well as an improved performance on measures of memory and verbal fluency among Alzheimer patients and their care givers from a baseline to 2 month follow up testing. Three controlled clinical trials assessing the effect of Progressive muscle relaxation on sleep reported an improvement in sleep quality and insomnia.

Ghafari et.al (2009) explained that Progressive muscle relaxation helps in increasing the quality of life by conducting a study among a group of multiple sclerosis patients. The samples were grouped as experimental group was given 63 session of muscle relaxation for 2 month duration and repeated measurement showed that there is significant improvement in the whole and dimensions of health related quality of life.

Hazwani (2011) evaluated the effectiveness of progressive muscle relaxation in improving the mood status of young soccer players and stated that most players experience a certain degree of frustration and moderate to severe mood changes. After muscle relaxation sessions, their mood status improved significantly.

Sheu et.al (2007) conducted a study to examine the effectiveness Progressive muscle relaxation on blood pressure and psychological status in clients with essential hypertension and it was found that Progressive muscle relaxation brought about a decrease in pulse rate, systolic blood pressure and diastolic blood pressure and diastolic blood pressure and lowered patients perception of stress and it enhanced the perception of health.

Zhang et.al (2012) reported that Progressive muscle relaxation can effectively reduce anxiety and improve health related quality of life of patients with ectopic pregnancy. It is a useful intervention to reduce anxiety levels across a spectrum of psychiatric disorders (Chu et.al 2009).

Sanaat (2012) explained that progressive muscle relaxation training is effective in reducing the anxiety and depression and improving the quality of life in cancer patients undergoing chemotherapy .It is also effective in reducing the fatigue and improving the quality of life cancer patients undergoing chemotherapy .It is also effective reducing the fatigue and improving the sleep quality in cancer patients receiving chemotherapy (Komuru 2010) .

Fadiloglu (2008) conducted a study to evaluate the effectiveness of Progressive muscle relaxation on the anxiety levels and quality of life in dialysis patients. The muscle relaxation sessions were given for 6 weeks and study findings demonstrated that the relaxation training decreased the anxiety levels and improved the quality of life in the dialysis patients.

Nilhan Sezgin and Bahar Ozcan (2009) investigated the effect of progressive muscle relaxation on anxiety among a group of high school students which shown a statistically significant decrease in the test anxiety scores of the experimental group who were subjected to progressive muscle relaxation.

A study examining variation in pain outcomes achieved after progressive muscle relaxation and analgesic imaginary intervention among 40 hospitalised patients with cancer pain, revealed that both Progressive muscle relaxation and analgesic imaginary produced greater improvements in pain intensity, pain related distress and perceived control pain than control (Kweekkeboom2007) .

Literature related to effectiveness of progressive muscle relaxation on reducing pain and fatigue.

Song et al. (2013) conducted a study with 50 experimental and 50 control patients who were diagnosed with breast cancer, underwent radical mastectomy, and would receive chemotherapy for the first time and had patience to perform progressive muscle relaxation exercise. After implementation of the practice, they found the relaxation exercise reduced anxiety and other side effects of chemotherapy.

Andreas Charalambous and Evangelos Bozas (2011) conducted a study on effectiveness of guided imagery and progressive muscle relaxation, as stress reducing intervention in patients with prostate and breast cancers that undergo chemotherapy .The study was conducted for 3 weeks, the findings showed that patients with prostate and

breast cancer undergoing chemotherapy treatment benefited from progressive muscle relaxation.

Mishra. et al (2012) investigated the effect of exercise intervention on quality of life in all cancer patients who were receiving chemotherapy, and found that these exercises were most effective in the breast cancer patient groups and there was reduced depression, and fatigue, and increased physical functioning in this group of patient

Cheng et al. (2013) investigated the effectiveness of PMR on both breast cancer and prostate cancer patients and concluded that the relaxation exercise reduced the level of anxiety and depression in both breast cancer and prostate cancer patients.

The study of Hayama and Inoue (2012) found that deep breathing exercise and PMR reduced the level of fatigue and anxiety in gyanaecological patients who were receiving chemotherapy.

Asian Pacific journal of cancer prevention (2015) stated that the effectiveness of progressive relaxation exercises on anxiety and comfort of breast cancer receiving chemotherapy. The study was conducted to observe the effect of PMR on anxiety and comfort level. A control group pre test-post test quasi experimental model was applied with experimental 30 and control group 30 who participated in this study. The study concluded the progressive relaxation exercises had a positive effect on anxiety level.

The oncology nursing association (2010) states that progressive muscle relaxation is a technique of alternate tensing and relaxing muscles groups in sequence

throughout the body .When going through muscle group individuals may do one side of the body at time or both sides. PMR showed effectiveness in patients with anxiety, dyspnoea and fatigue.

Demiralp, m., oflaz et.al (2010) conducted a study on effectiveness on progressive muscle relaxation, on sleep quality and fatigue in patients with breast cancer receiving chemotherapy .The study was conducted in the outpatient department in medical oncology department .The finding suggested that PMR enhanced the sleep and reduced the fatigue.

Thomas G.B and Jeanne N.L (2009) suggested that the use of progressive relaxation exercises may be an effective means of reducing several of the adverse side effects of cancer chemotherapy like anxiety, pain and sleep disturbances and psychological wellbeing among the patients.

Lyles (2008) conducted a study to check the effectiveness of progressive muscle relaxation on the level of pain and anxiety levels in 50 cancer patients receiving intravenous chemotherapy. The study concluded that those who received relaxation training reported feeling significantly less anxious during chemotherapy, less physiological arousal and less anxiety and depression immediately after chemotherapy.

CONCEPTUAL FRAMEWORK

Conceptual Framework for this study was derived from Callista Roy's Adaption Model (1991). Roy in her model focuses on the goal of nursing which is to facilitate adaptation of individual for various stimuli from environment.

This model focuses on the concept of adaptation of person. As an open living system, the person receives input or stimuli from environment and the self. The adaptation level is determined by the combined effect of focal, contextual and residual stimuli. Adaptation occurs when the person responds positively to environmental changes. This adaptive response promotes the integrity of a person.

INPUT

Input consists of stimuli which can either come from the environment or within the person. In this study refers to pain and fatigue induced by chemotherapy in a person.

THROUGHPUT

Throughput refers to the person's process and effectors. Process is the control mechanism that a person uses for an adaptive system. In this study progressive muscle relaxation served as a control mechanism to adapt to stimuli. Effectors refer to the adaptive models. Physiological function, self-concept role function and inter dependence are involved in adaptation.

PSYCHOLOGICAL FUNCTION

It involves the body's basic needs for the clients receiving chemotherapy which includes relief from pain and fatigue during chemotherapy treatment.

SELF-CONCEPT

Self-concept is about body and feeling on one's body image. Chemotherapy and its side effects cause changes in the body image and disturb the self-acceptance of a person.

ROLE FUNCTION

Role function refers to the behaviours of a person and how a person interacts with significant persons in the family and others in the society.

INTER DEPENDENCE

Involves a person's relationship with others and support system .In this study the client is interdependent on support system like doctors, nurses, other health personals and family members to seek information regarding management of side effects of chemotherapy.

OUTPUT

Output is the outcome of the system process. In this study output refers reduction in pain and fatigue after providing is progressive muscle relaxation. This output gives feedback for the open system .If the feedback is negative the process is again

reassessed and redirected process is continued. Progressive muscle relaxation as an intervention is provided to control the sub system of regulator and cognator coping mechanisms to control chemotherapy induced pain and fatigue. The group which receives progressive muscle relaxation exhibit adaptive response to control level of pain and fatigue

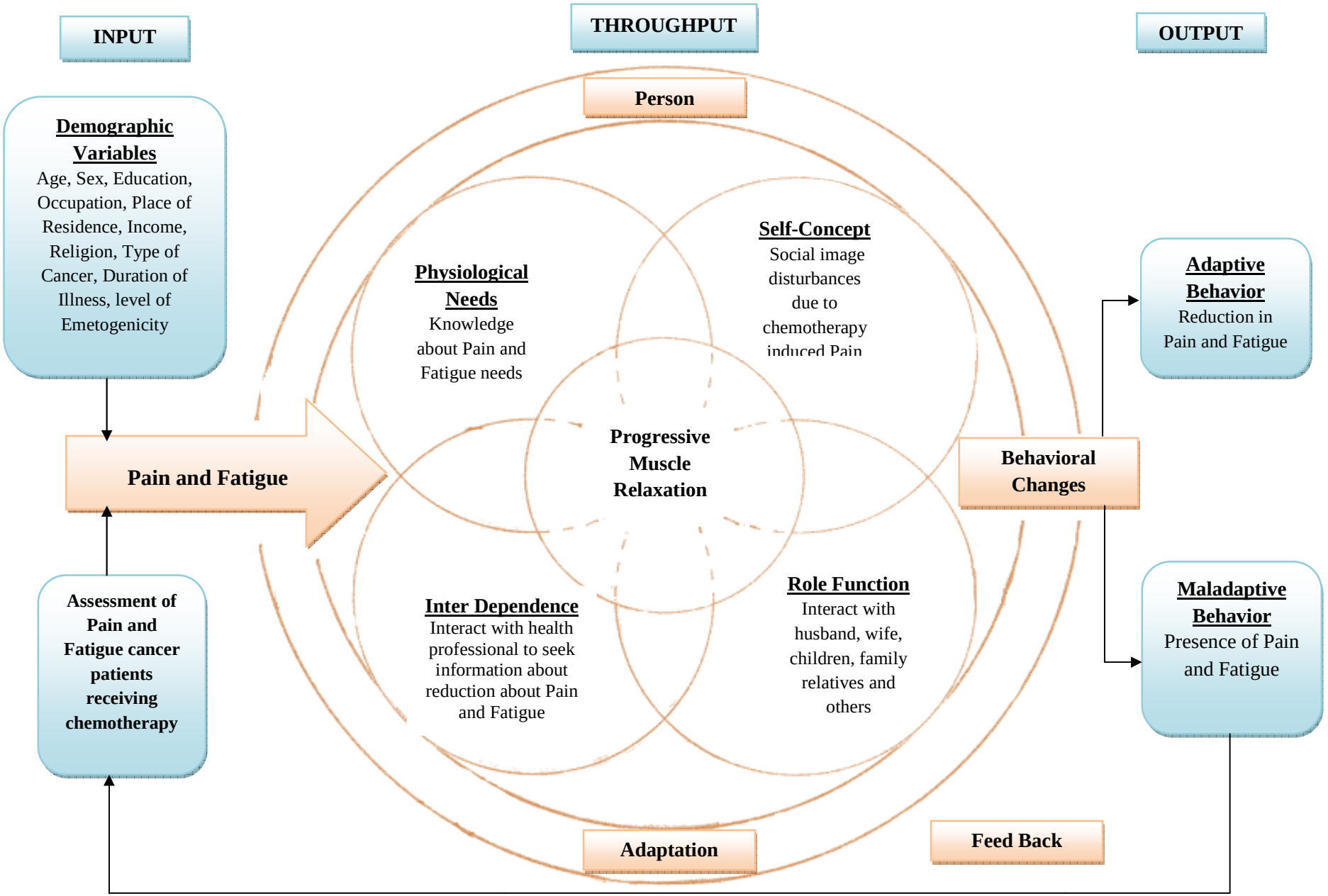

Figure. 1 Conceptual framework based on modified Roy's Adaptation model

CHAPTER-III

METHODOLOGY

This chapter includes the research approach, research design, setting of study, population and sample size, sampling technique, criteria for the selection of the sample, data collection procedure and plan for data analysis.

RESEARCH APPROACH

Quasi experimental approach, a sub type of quantitative research was used for the study.

RESEARCH DESIGN

Quasi experimental approach was used for the study.

E O_1 X O_2

C O_3 O_4

Where

E - Experimental group

C - Control group

X - Progressive Muscle Relaxation

O_1 - Pre Test Experimental Group

O_2 - Post test Experimental Group

O_3 - Pre Test Control Group

O_4 - Post Test Control Group

SETTING OF THE STUDY

The study was conducted at Ashwin Hospital; Coimbatore is situated 7 kms away from PPG College of Nursing. It is a 110 bedded multi speciality hospital equipped with inpatient and outpatient unit.

POPULATION

The accessible population included with chemotherapy induced pain and fatigue.

SAMPLE SIZE

The sample size was 40 out of which 20 patients were in experimental group and the rest 20 patients were in control group.

SAMPLING TECHNIQUE

Non-probability purposive sampling technique was used for selecting the sample.

CRITERIA FOR SELECTION OF SAMPLES

INCLUSIVE CRITERIA

- Male and female patients above 18 yrs of age.
- Patients undergoing 5 days chemotherapy cycle and above.
- Patients receiving chemotherapeutic drugs.
- Patients who are experiencing pain and fatigue.
- Patients who know to write and speak Tamil and English.
- Patients who are able to follow instructions.

EXCLUSIVE CRITERIA

- Patients who are critically ill
- Patients who are receiving other complementary therapies like meditation, yoga, etc...
- Patients who are having hypertension, recent surgery, serious injuries, muscle spasm and spine problems.
- Patients with sensory perceptual disorders.

DESCRIPTION OF THE TOOL

SECTION A

DEMOGRAPHIC VARIABLES

Distribution of base line variables like age, sex, education, religion, occupation, income, place of residence, personal habits, types of cancer, duration of illness.

SECTION B

PAIN AND FATIGUE RATING SCALE

This section included rating scale for assessment of pain and fatigue which includes

SCORING OF PAIN:

The numerical pain rating scale is displayed as a line numbered from zero to ten.

Scoring,

0 - none

1-3 - mild

4-6 - moderate

7-10 - severe

The possible maximum score = 10 indicate worst pain

The possible minimum score = 0 indicate no pain

SCORING FOR FATIGUE:

The Sherwin's numerical fatigue rating scale is displayed as a line numbered from zero to ten.

Scoring,

0- no fatigue

1-3 -mild fatigue

4-6 -moderate fatigue

7-9 -extreme fatigue

10 -worst fatigue

The possible maximum score = 10 indicate worst fatigue

The possible minimum score = 0 indicate no fatigue

TESTING OF TOOL

CONTENT VALIDITY

The tool was given to five expert in the field of medical and surgical and oncology department. All the comments and suggestions given by the experts were dully considered and corrections were made.

RELIABILITY

The reliability of tool was established by split half method and the score obtained was 0.82.

PILOT STUDY

The pilot study was conducted to make sure that the tool was capable of eliciting response from the respondent. It was conducted among 10 patients, 5 patients each for experimental and control group, for a period of one week. The report showed that there was a decrease in pain and fatigue in patients who underwent chemotherapy. The result showed the tool was reliable.

DATA COLLECTION PROCEDURE

The formal permission was obtained from the chairman of Ashwin hospital and from the head of oncology department to conduct a study. The study was carried out for a period of 4 weeks from 1-11-15 to 31-11-15.

The samples were selected by using non-probability purposive sampling technique on the basis of selection criteria. Consents were taken from the respondents. 20 samples were considered as control and 20 were selected as experimental group. After the general instruction the investigator collected demographic data.

The patients who were included in the control group followed the routine chemotherapy and the post test was done on fifth day by assessing the pain and fatigue.

The experimental group was subjected to progressive muscle relaxation for five days, two times a day and every day at the same time. Progressive muscle relaxation was given for 15-20 min for each session; on the fifth day of the study post test was done by assessing the pain and fatigue after chemotherapy by using pain and fatigue scale.

PLAN FOR DATA ANALYSIS

The investigator adopted descriptive and inferential statistics to analyse data. The demographic variable using were analysed by using frequency and percentage. The effectiveness of progressive muscle relaxation and the association between the variables were analysed by using independent‘t’ test and χ^2 test.

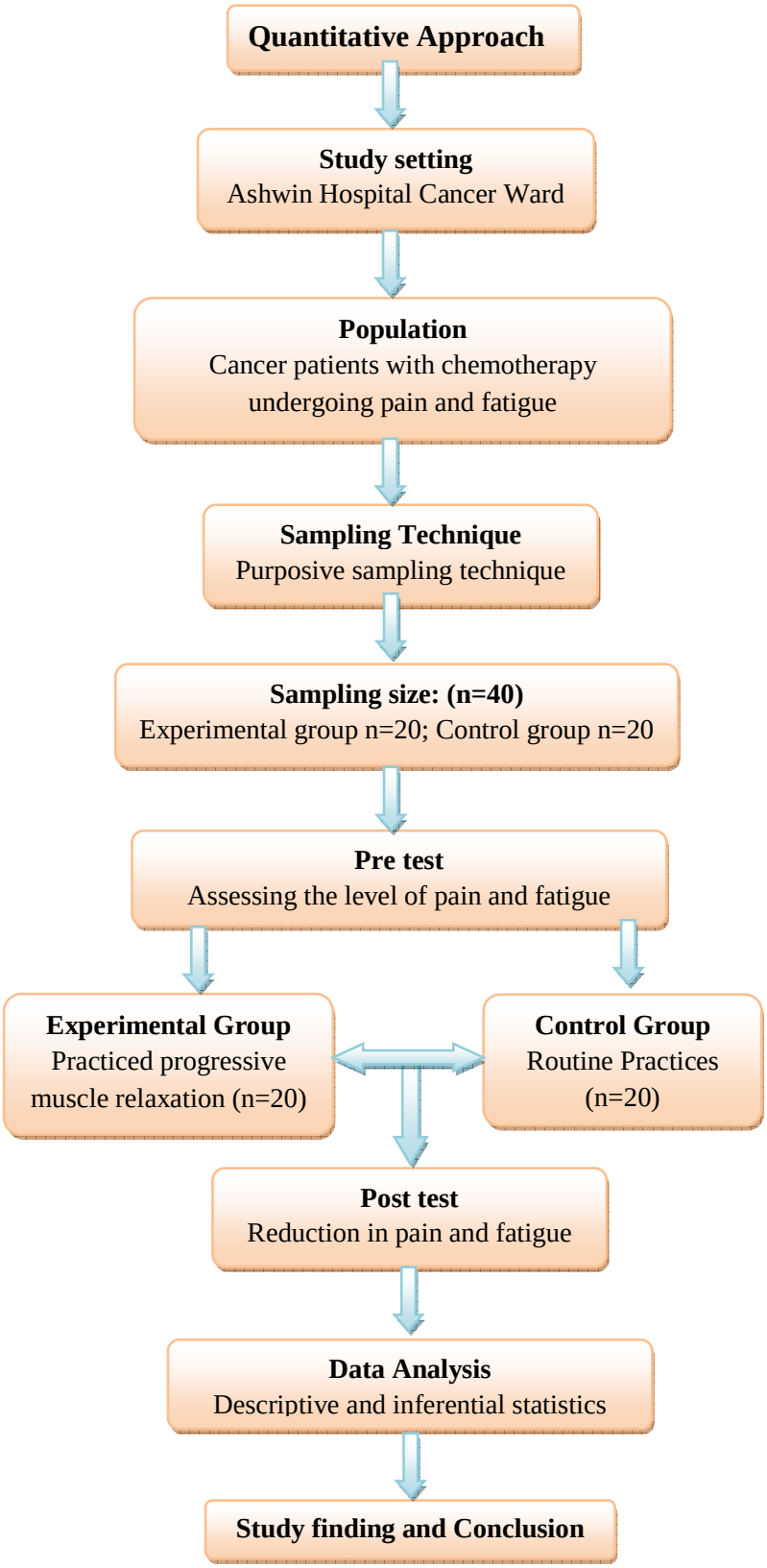

Figure.2 The Overall view of Research Methodology

CHAPTER-IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of collected data from 40 patients with cancer receiving chemotherapy, to assess effectiveness of progressive muscle relaxation on the level of pain and fatigue.

The study findings based on the descriptive and inferential statistical analysis are presented as follows.

Section –I: Description of demographic variables of patients among control and experimental group undergoing chemotherapy.

Section-II: Description of post test scores regarding pain rating scale between the control and experimental group among cancer patients receiving chemotherapy.

Section –III: Description of post test scores regarding fatigue rating scale between the control and experimental group among cancer patients receiving chemotherapy.

Section-IV: Association of the demographic variables with post test scores of experimental group regarding pain rating scale.

Section –V: Association of the demographic variables with post test scores of experimental group regarding fatigue rating scale.

SECTION-I

Table 1 Description of demographic variables of patients among control and experimental group undergoing chemotherapy

S.No.	Demographic Variables	Control Group (n=20)		Experimental Group (n=20)	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1	**Age in years**				
	a) 18-30yrs	2	10	1	5
	b) 31-40yrs	2	10	4	20
	c) 41-50yrs	7	35	8	40
	d) 51-60yrs	4	20	3	15
	e) Above60 years	5	25	4	20
2.	**Sex**				
	a) Male	10	50	8	40
	b) Female	10	50	12	60
3.	**Educational Status**				
	a) Illiterate	4	20	7	35
	b) Primary	5	25	5	25
	c) Secondary	5	25	4	20
	d) Higher secondary	2	10	2	10
	e) Graduate	4	20	2	10

4.	**Religion**				
	a) Hindu	8	40	10	50
	b) Muslim	5	25	4	20
	c) Christian	7	35	6	30
5.	**Occupation**				
	a)Unemployed /Homemaker	7	35	6	30
	b) Self employed	7	35	7	35
	c) Labourer	3	15	5	25
	d) Office work	3	15	2	10
6.	**Monthly income**				
	a) Rs.1500	3	15	2	10
	b) Rs.1501-3000	7	35	8	40
	c) Rs.3001-4500	5	25	5	25
	d) Above Rs.4501	5	25	5	25
7.	**Place of Residence**				
	a)Rural	13	65	12	60
	b)Urban	7	35	8	40
8.	**Types of Cancer**				
	a) Breast cancer	9	45	9	45
	b) Lung cancer	5	25	4	20
	c) Stomach cancer	1	5	3	15
	d) Others	5	25	4	20

9.	**Personal Habits** a) Smoking b) Alcoholism c)Both smoking and alcoholism d) Chewing tobacco e) None of above	 5 3 4 3 5	 25 15 20 15 25	 5 3 4 4 4	 25 15 20 20 20
10.	**Duration of Illness** a)1-4 months b) 5-8 months c) 9-12 months d) Above 12 months	 8 6 4 2	 40 30 20 10	 5 11 3 1	 25 55 15 5

Table 1 shows the description of demographic variables of control and experimental group

- Among the respondents , 2 (10%) were in the age group of 18-30 years , 2 (10%) were between 31-40 years, 7 (35%) were in the age group of 41-50 years, 4 (20%) were between 51-60 years, and 5 (25%) were above 60 years in the control group, 1 (5%) was in the age group 18-30 years ,4 (20%) were between 31-40 years, 8 (40%) were between 41-50 years ,3 (15%) were in the age group of 51-60 years,4 (20%) were above 60 years of age in the experimental group.

- Regarding the sex of the respondents, 10 (50%) were male and 10 (50%) were female in the control group, 8 (60%) were male and 12 (60%) were female in the experimental group.

- With regard to the educational status, 4(20%) were illiterate, 5(25%) had primary education, 5(25%) had secondary education, 2(10%) had higher secondaryeducation,4(20%) were graduate in control group, 7(35%),were illiterate, 5(25%) had primary education ,4(20%) had secondary education, 2(10%) had higher secondary education, 2(10%) were graduate in experimental group.

- With regard to religion, 8(40%) were Hindus, 5(25%) were Muslims, 7(35%) were Christians in the control group, 10(50%) were Hindus, 4(20%) were Muslims, 6(30%) were Christians in the experimental group.

- Among occupation, 7(35%) were unemployed or homemakers, 7(35%) were self employed, 3(15%) were labourers and 3(15%) did office work in the control group, 6(30%) were unemployed and homemakers, 7(35%) were self employed, 5(25%) were labourers and 2(10%) did office work in the experimental group.

- Regarding the monthly income, 3(15%) monthly income of ₹. 1500/ month,7(35%) were between the range of ₹.1501-3000 /month,5(25%) had monthly income ₹.3001-4500 /month, and 5(25%) had above ₹.4500/month income in the control group, 2(10%) had

monthly income of ₹.1500 /month ,8(40%) were between the range of ₹.1501-3000 /month, 5(25%) had above ₹. 4500/month income in the experimental group.

- Regarding the place of residence, 13(75%) were residing in the rural areas, 7(35%) in the urban area in the control group, 12(60%) were residing in the rural areas, 8(40%) in the urban area in the experimental group.

- With regard to the type of cancer, 9(45%) had breast cancer, 5(25%) had lung cancer, 1(15%) had stomach cancer , 5(25%) had other type of cancer in the control group, 9(45%) had breast cancer , 4(20%) had lung cancer, 3(15%) had stomach cancer , 4(20%)had lung cancer , 3(15%) had stomach cancer , 4(20%) had other type of cancers in the experimental group.

- Considering the personal habits, 5(25%) had the habit of smoking, 3(15%) had alcoholism, 4(20%) had both smoking and alcoholism, 3(15%) had alcoholism, 4 (20%) had both smoking and alcoholism, 4(20%) had the habit of chewing tobacco, and 4(20%) had none of the personal habits in experimental group.

- Regarding the duration of illness ,8(40%) were between 1-4 months, 6(30%) were in 5-8 months, 4(20%) had between 9-12 months, 2(10%) had above 12 months duration of illness in the control group, 5(25%) were between 1-4 months. 11(55%) were in 5-8 months, 3(15%) had between 9-12 months, 1(5%) had above 12 months duration of illness in the experimental group.

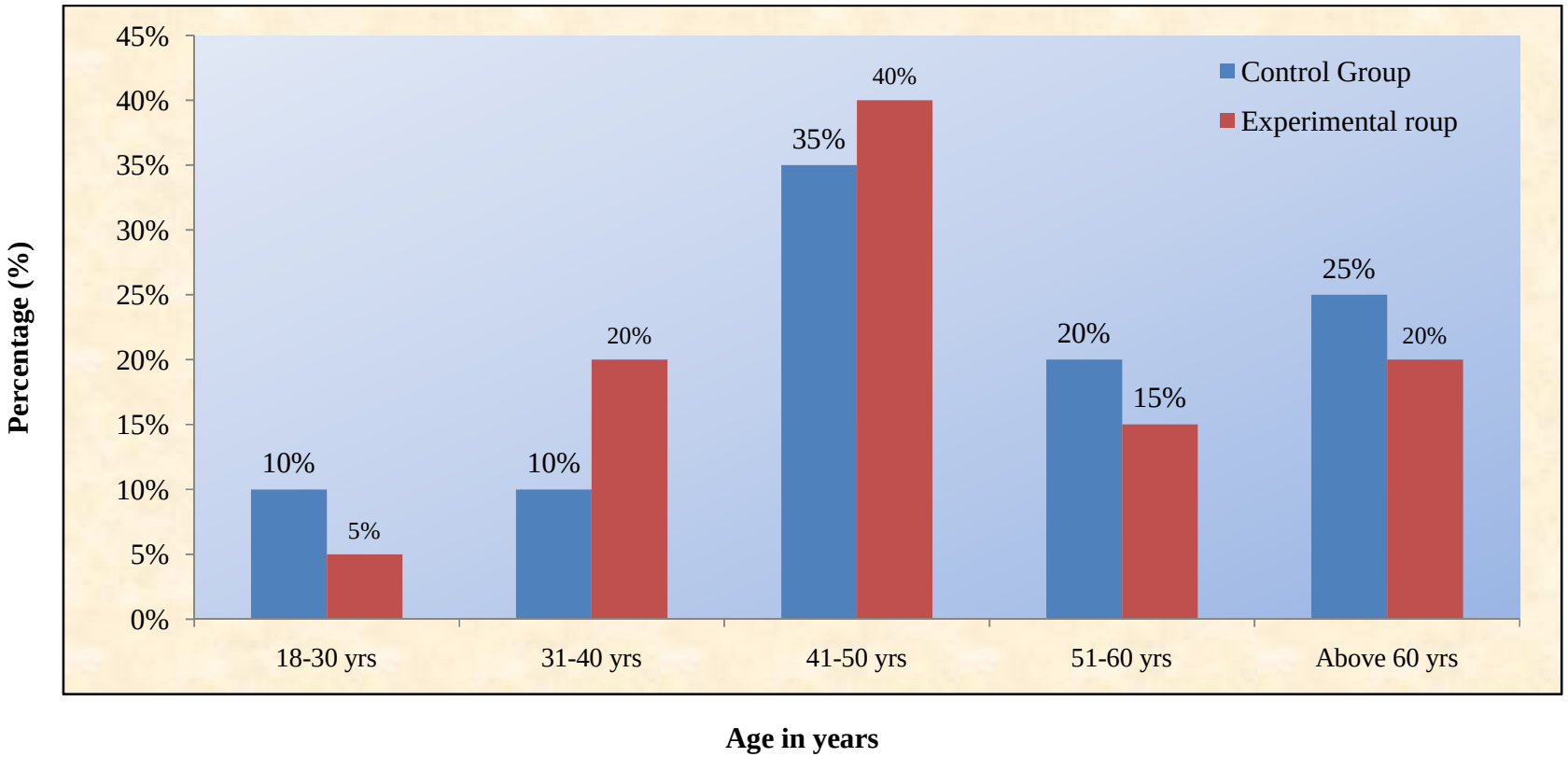

Figure. 3 Distribution of Demographic Variables according to age of patient receiving Chemotherapy

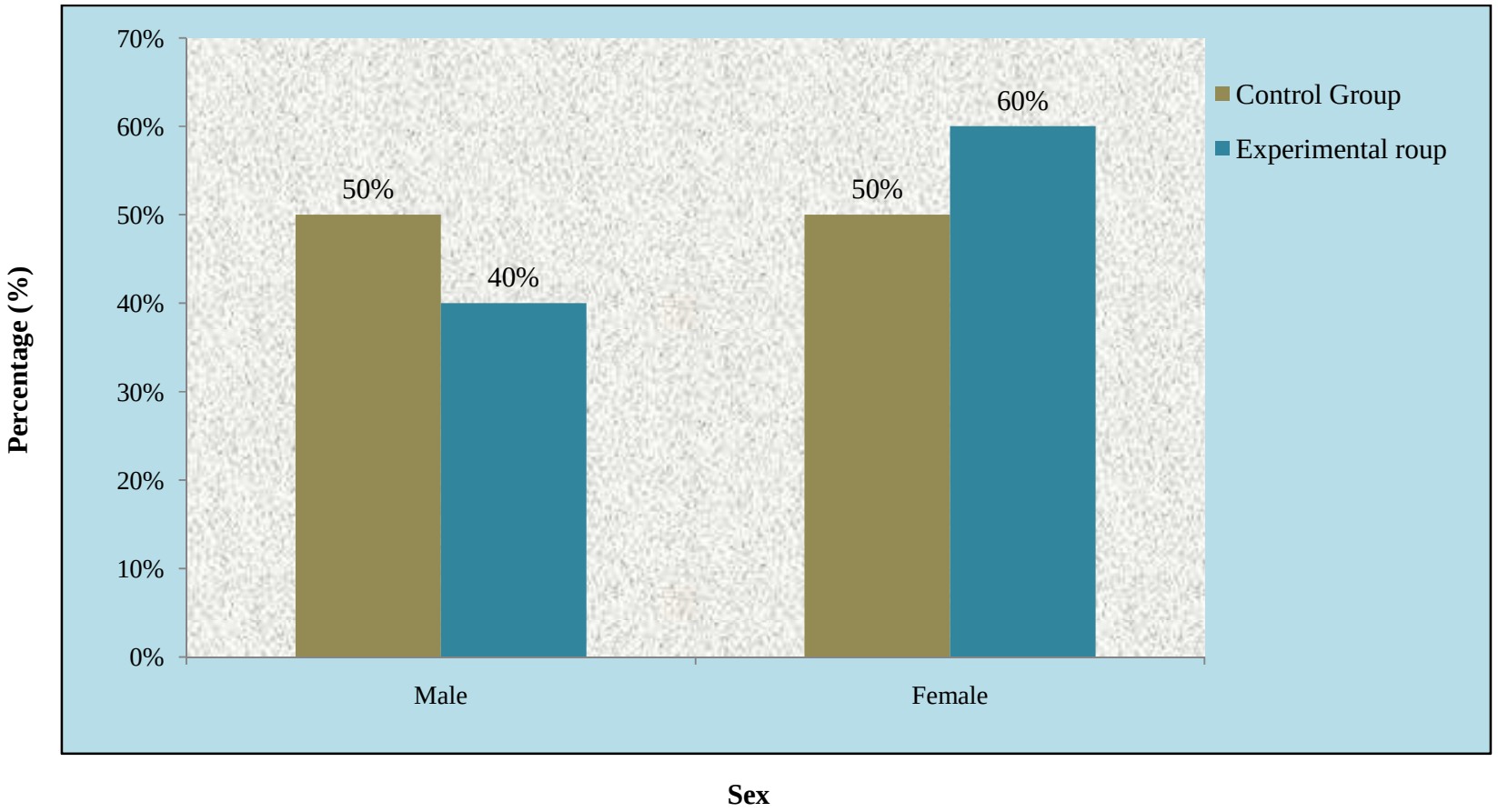

Figure. 4 Distribution Demographic Variables according to the sex of the patient receiving Chemotherapy

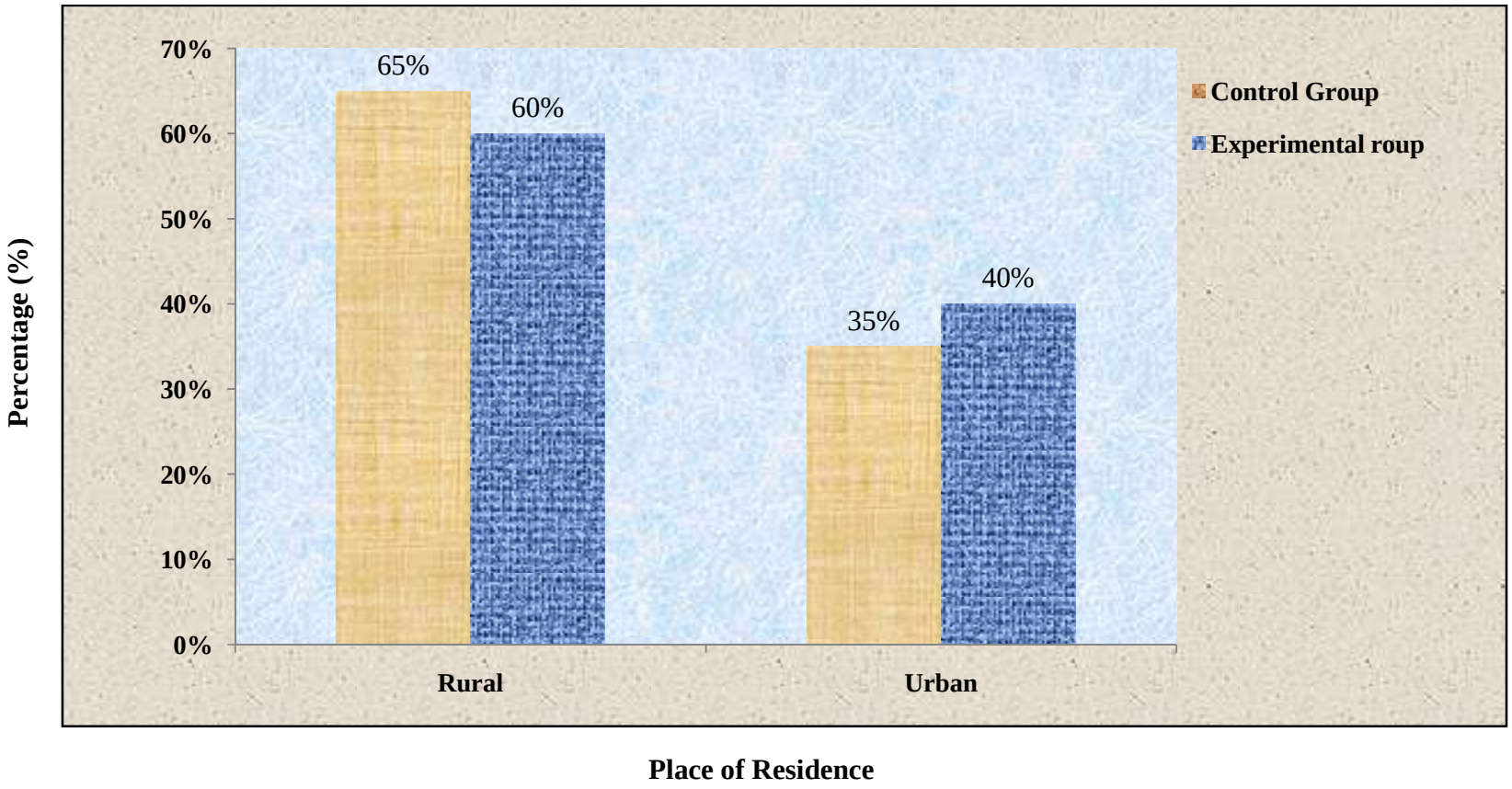

Figure. 5 Distribution Demographic Variables according to Place of Residence of patient Receiving Chemotherapy

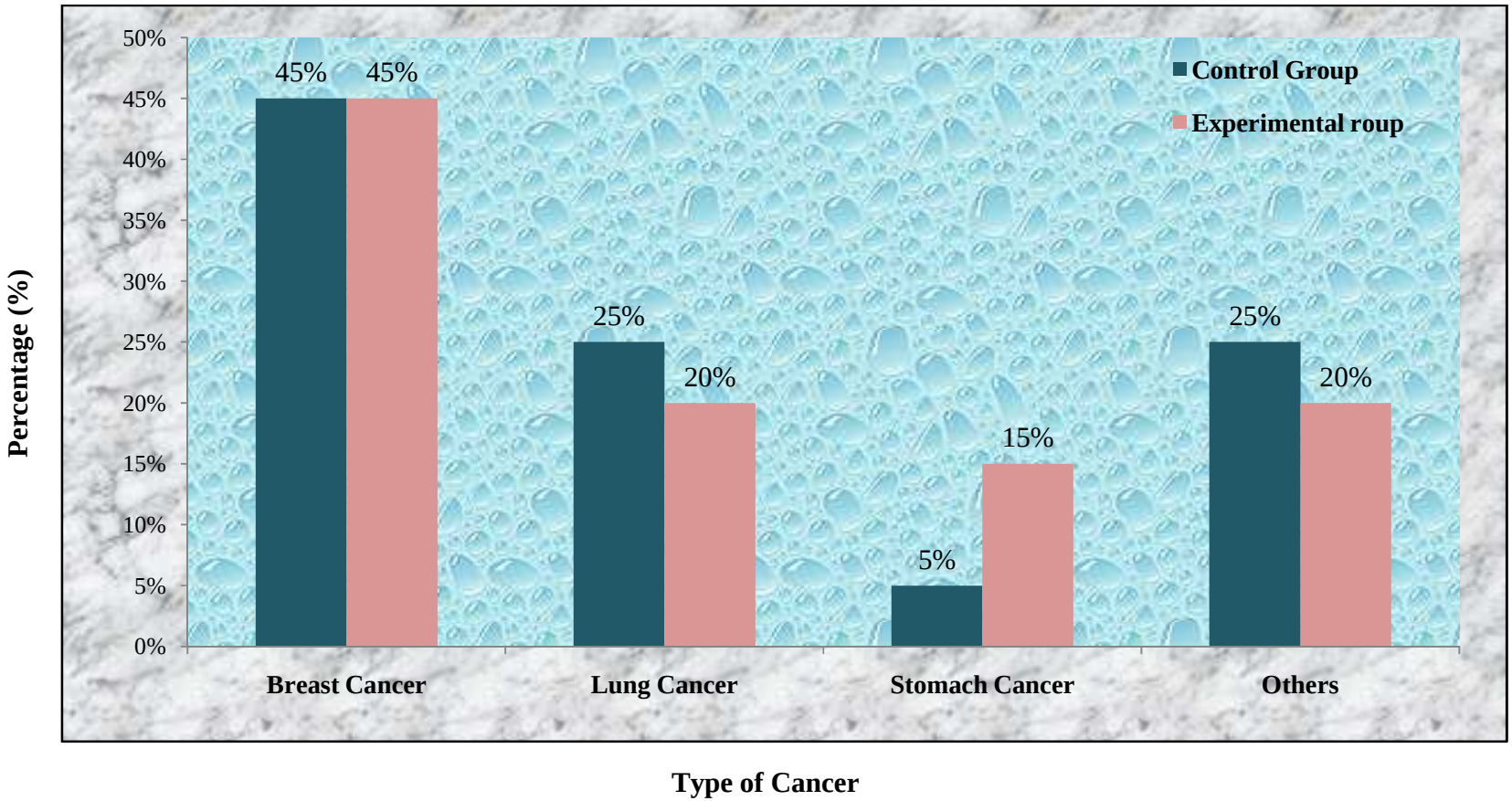

Figure. 6 Distribution Demographic Variables according to Type of Cancer in patients Receiving Chemotherapy

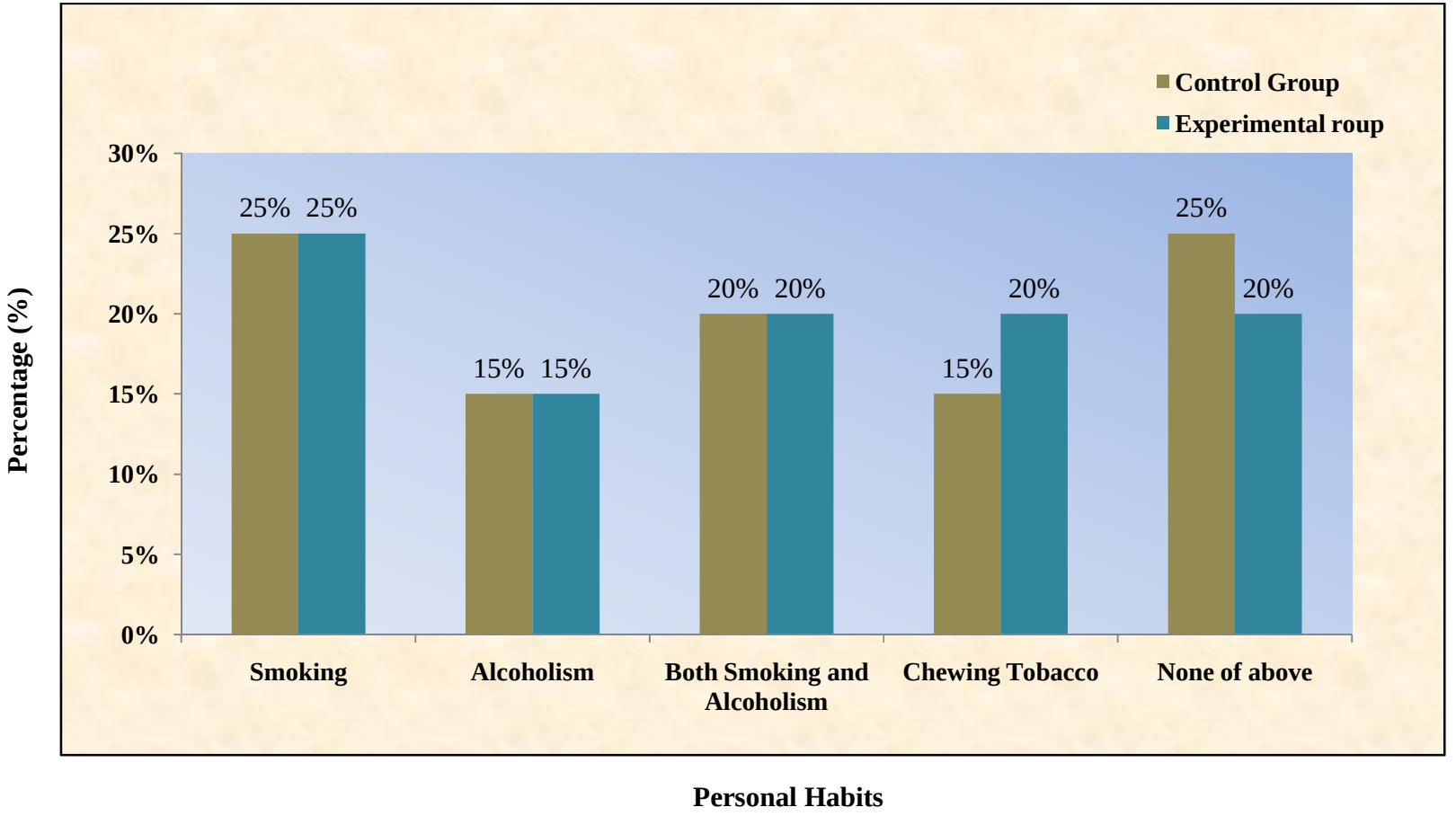

Figure. 7 Distribution of Demographic Variables according to Personal Habits of patients Receiving Chemotherapy

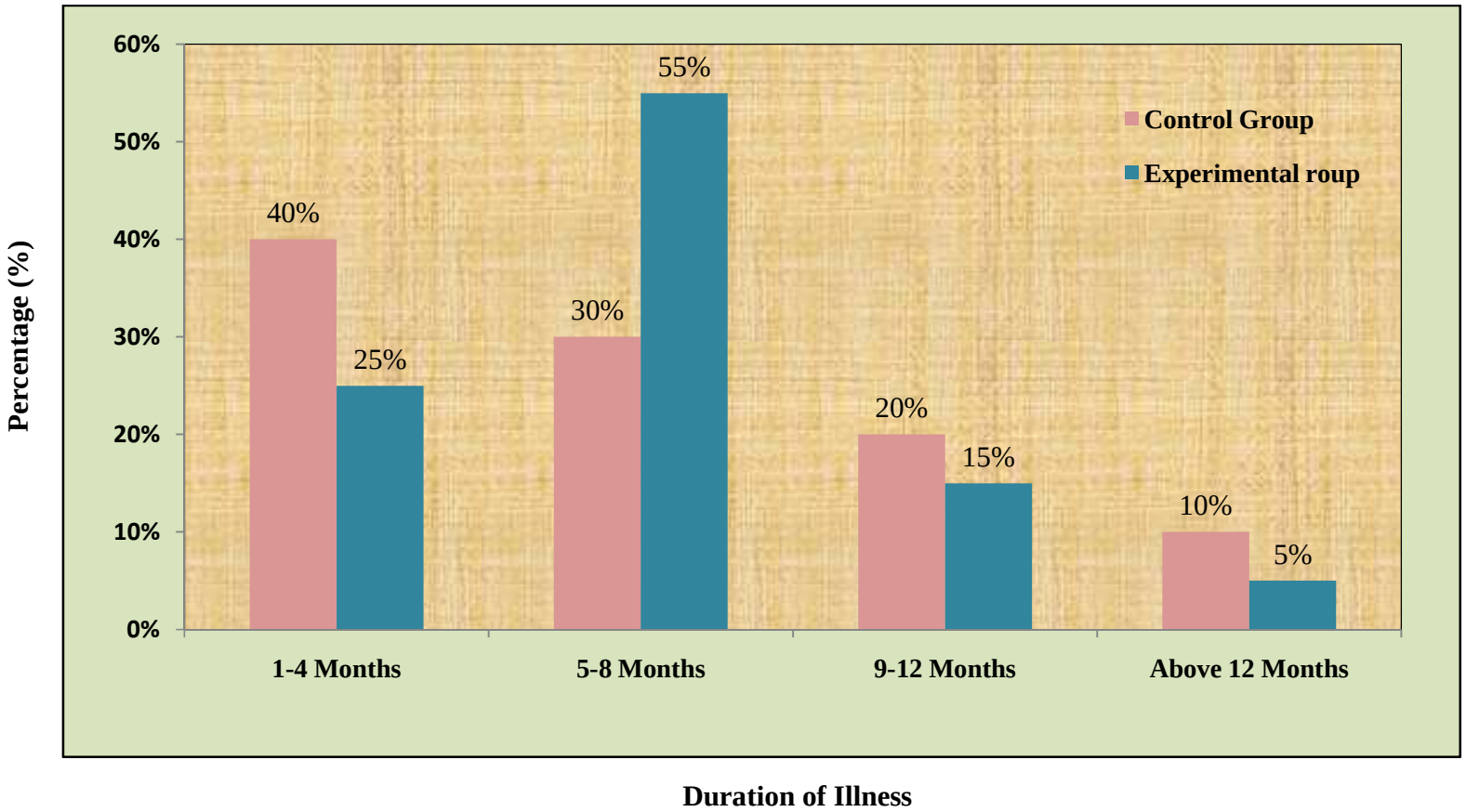

Figure. 8 Distribution Demographic Variables according to Duration of Illness of patient Receiving Chemotherapy

SECTION-II

Table. 2 Descriptions of Post Test Scores Regarding Pain Rating Scale between Control and Experimental Group among Cancer Patients Receiving Chemotherapy

(n=40)

S.No	Pain	Mean	Standard Deviation	't' value
1.	Control group	4.9	1.47	3.2
2.	Experimental group	2.7	1.22	

*Significant at 0.05 level

Table 2 shows the post-test mean score for pain in control group was 4.9and experimental group was 2.7 The calculated t value was 3.2 at 38 degrees of freedom and 0.05 level of significance which is greater than the table value (1.96), hence it is significant. It showed that the practice of progressive muscle relaxation technique has significant effect of minimizing pain among cancer patients receiving chemotherapy.

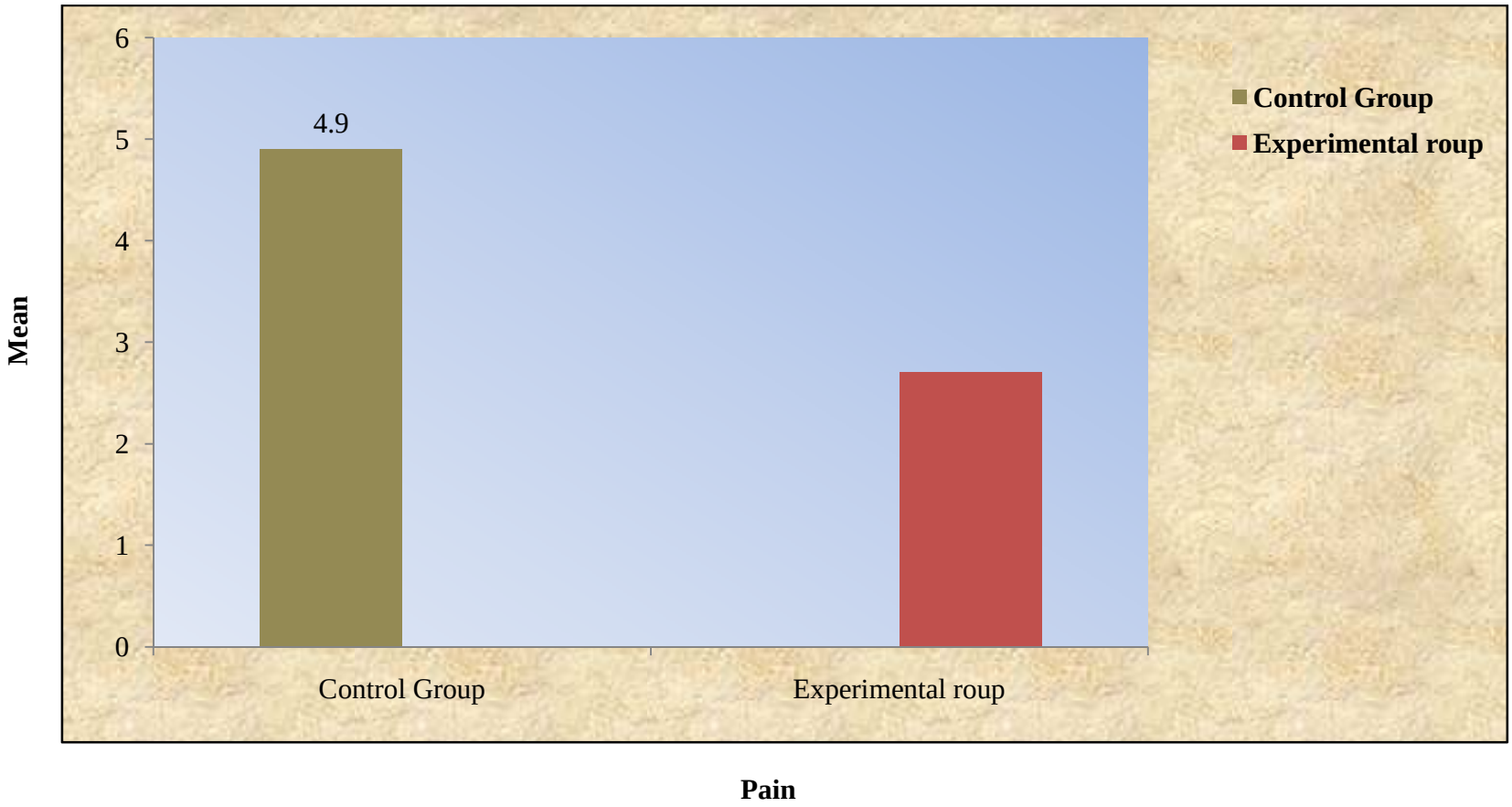

Figure. 9 Comparison of Statistical value of

Post Test Mean scores of Pain between control and Experimental group

SECTION-III

Table. 3 Descriptions of Post Test Scores Regarding Fatigue Rating Scale between Control and Experimental Group among Cancer Patients Receiving Chemotherapy

(n=40)

S.No	Fatigue	Mean	Standard Deviation	't' value
1.	Control group	2.5	0.8	4.26
2.	Experimental group	1.2	0.25	

*Significant at 0.05 level

Table 3 shows the post-test mean score for fatigue in control group was 2.5and experimental group was 1.2 The calculated t value was 4.26 at 38 degrees of freedom and 0.05 level of significance which is greater than the table value (1.96), hence it is significant. It showed that the practice of progressive muscle relaxation technique has significant effect of minimizing fatigue among cancer patients receiving chemotherapy.

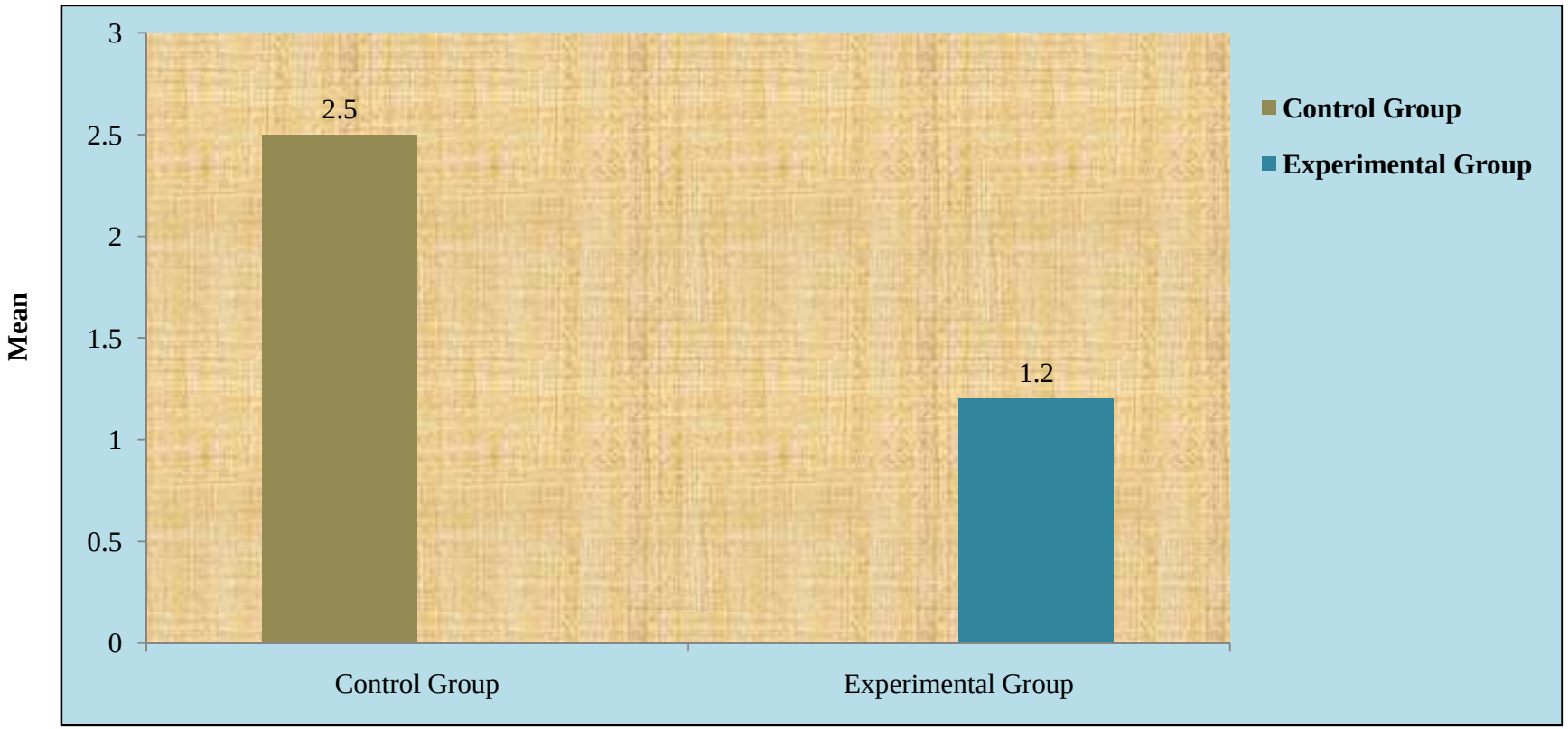

Figure. 10 Comparison of Statistical value of

Post Test Mean scores of Fatigue between control and Experimental group

SECTION-IV

Table 4 Association of Demographic Variables with Post Test Scores of Experimental Group Regarding Pain Rating scale

(n=40)

S.No.	Demographic Variables	Below Mean	Above Mean	Degree of freedom	χ^2
1	**Age in years**				
	a) 18-30yrs	1	0		
	b) 31-40yrs	3	1		
	c) 41-50yrs	4	4	4	8.52
	d) 51-60yrs	0	3		
	e) Above60 years	4	0		
2.	**Sex**				
	a) Male	2	4	1	2.14
	b) Female	7	5		
3.	**Educational Status**				
	a) Illiterate	5	2		
	b) Primary	4	1		
	c) Secondary	1	3	4	4.67
	d) Higher secondary	1	1		
	e) Graduate	2	0		

4.	**Religion** a) Hindu b) Muslim c) Christian	6 4 3	4 0 3	2	2.84
5.	**Occupation** a) Unemployed /Homemaker b) Self employed c) Labourer d) Office work	5 3 3 2	1 4 2 0	3	3.45
6.	**Monthly income** a) Rs.1500 b) Rs.1501-3000 c) Rs.3001-4500 d) Above Rs.4501	2 6 3 2	0 2 2 3	3	2.52
7.	**Place of Residence** a)Rural b)Urban	10 3	2 5	1	4.42
8.	**Types of Cancer** a) Breast cancer b) Lung cancer c) Stomach cancer d) Others	7 3 2 1	2 1 1 3	3	3.6

9.	**Personal Habits** a) Smoking b) Alcoholism c) Both smoking and alcoholism d) Chewing tobacco e) None of above	 2 1 2 2 4	 3 2 2 2 0	4	4.33
10.	**Duration of Illness** a)1-4 months b) 5-8 months c) 9-12 months d) Above 12 months	 5 7 1 0	 0 4 2 1	3	5.83

Table 4 shows the demographic variables like age, sex, education, religion, occupation, income, place of residence, personal habits, type of cancer, duration of illness showed no significant association with post test score of score of nausea among experimental group.

SECTION-V

Table 5 Association of Demographic Variables with Post Test Scores of Experimental Group Regarding Fatigue Rating scale

(n=40)

S.No.	Demographic Variables	Below Mean	Above Mean	Degree of freedom	χ^2
1	**Age in years**				
	a) 18-30yrs	0	1		
	b) 31-40yrs	3	1		
	c) 41-50yrs	6	2	4	4.41
	d) 51-60yrs	2	1		
	e) Above60 years	4	0		
2.	**Sex**				
	a) Male	7	1	1	2.95
	b) Female	6	6		
3.	**Educational Status**				
	a) Illiterate	5	2		
	b) Primary	4	1		
	c) Secondary	3	1	4	1.81
	d) Higher secondary	1	1		
	e) Graduate	2	0		

4.	**Religion** a) Hindu b) Muslim c) Christian	 6 1 4	 4 3 2	2	1.86
5.	**Occupation** a)Unemployed /Homemaker b) Self employed c) Labourer d) Office work	 4 5 4 2	 2 2 1 0	3	1.4
6.	**Monthly income** a) Rs.1500 b) Rs.1501-3000 c) Rs.3001-4500 d) Above Rs.4501	 0 5 4 4	 2 3 1 1	3	4.7
7.	**Place of Residence** a)Rural b)Urban	 7 6	 5 2	1	0.57
8.	**Types of Cancer** a) Breast cancer b) Lung cancer c) Stomach cancer d) Others	 5 3 3 4	 4 1 0 0	3	2.67

9.	**Personal Habits** a) Smoking b) Alcoholism c) Both smoking and alcoholism d) Chewing tobacco e) None of above	 5 2 1 3 1	 0 1 3 1 3	4	7.78
10.	**Duration of Illness** a)1-4 months b) 5-8 months c) 9-12 months d) Above 12 months	 3 8 3 1	 2 3 0 0	3	2.12

Table 5 shows the demographic variables like age, sex, education, religion, occupation, income, place of residence, personal habits, type of cancer, duration of illness showed no significant association with post test score of score of vomiting among experimental group.

CHAPTER-V

RESULTS AND DISCUSSION

This is a quasi experimental study to assess the effectiveness of progressive muscle relaxation on the level pain and fatigue among cancer receiving chemotherapy. The results of the major study were discussed according to the objectives.

The first objective was to assess the level of pain and fatigue in cancer patients receiving chemotherapy between the control group and experimental group.

In this study numerical rating pain scale and the numerical rating fatigue scale was used for assessing the pain and fatigue. In the numerical rating pain scale the pre test mean score was 6.55 and standard deviation is 1.829. In the fatigue rating scale the pre test mean score was 5.15 and standard deviation is 1.98 .The data finding showed that the level of pain and fatigue are more in the initial day of the treatment.

Pragya Pathak (2011) conducted a study on effectiveness of progressive muscle relaxation on the level pain, fatigue and anxiety by live demonstration among cancer patients and the result showed that progressive muscle relaxation was effective in reducing pain, anxiety and fatigue.

The second objective was to educate the technique of progressive muscle relaxation to cancer patients receiving chemotherapy.

Educating the technique of progressive muscle relaxation among the experimental group was done through live demonstration by the researcher. After

showing the demonstration to the cancer patient, return demonstration was taken. The relaxation was given twice a day for 5 days for 15-20 minutes and pain and fatigue was assessed.

Muthulakshmi P and Rajalakshmi B (2012) explained that progressive muscle relaxation is a systematic technique for achieving a deep state of relaxation and the health benefits of relaxation includes decreasing heart rate and breathing rate, fatigue, lowering of blood pressure, improving concentration, reduction of stress, nausea and vomiting and pain perception, increasing blood flow throughout body and increases the sense of control over emotions and moods.

The third objective was to re-assess the level of pain and fatigue in experimental group and the control group.

In numerical rating pain scale the post test mean score of pain in control group was 4.9 and the post test mean score of pain in the experimental group was 2.7 .The obtained "t" value in pain was 3.20 at 0.05 level of significance. In numerical fatigue rating scale the post test mean score of fatigue in the control group was 2.5 and the post test mean score in the experimental group was 1.2 .The obtained "t" value in pain was 4.26 at 0.05 level of significance. It implies that there was a significant effect of progressive muscle relaxation on the level of pain and faigue.

Oncology nursing society (2014) states that Progressive muscle relaxation is a technique of alternately tensing and relaxing muscle group in sequences throughout the

body. When going through muscle group, individuals can start with the head and neck progress to feet on vice versa .Similarly, individuals may do one side of the body at a time, or both sides at the same time. Progressive muscle relaxation has been examined for its effectiveness in patients with cancer for managing anxiety, fatigue and pain.

The fourth objective of the study was to associate demographic variable with level of pain and pain among cancer patients receiving chemotherapy.

Association of demographic variables was found out through x^2 test. There was no association between post test level of pain, anxiety and fatigue with demographic variables like age, sex, educational status, religion, occupation, income, place of residence, personal habits, type of cancer, duration of illness.

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CHAPTER-VI

SUMMARY, CONCLUSION, NURSING IMPLICATION, LIMITATION AND RECOMMENDATION

SUMMARY

The study was conducted to assess the effectiveness of progressive muscle relaxation in reducing the level of pain and fatigue in cancer patients.

The purpose of the study was to provide knowledge regarding of progressive muscle relaxation in order to control chemotherapy induced pain and fatigue in cancer patients. This awareness will help them to maintain a healthy life.

THE FOLLOWING OBJECTIVE WERE SET FOR THE STUDY

a) To assess the level of pain and fatigue in cancer patients receiving chemotherapy.

b) To educate the technique of progressive muscle relaxation exercise in cancer patients receiving chemotherapy. To compare the level of pain between the control and the experimental group.

c) To re-assess the level of pain and fatigue in cancer patients receiving chemotherapy.

d) To associate the demographic variables with the level of pain and fatigue among the patients receiving chemotherapy.

HYPOTHESIS SET FOR THE STUDY

There is a significance effect on the level of pain and fatigue in cancer patients who received progressive muscle relaxation.

MAJOR FINDING OF THE STUDY ARE AS FOLLOWS

- The mean post test score of pain of the control group was 4.9 and the mean post test score of fatigue for the control group was 2.7.
- The mean post test score of fatigue of the control group was 2.5 and the mean post test score of fatigue for the experimental group was 1.2.
- The obtained‘t’ value for comparing pain among the control and experimental group was 3.2 at 38 degree of freedom at 0.05 level of significance.
- The obtained t value for comparing fatigue among the control and experimental group was 4.26 at 38 degree of freedom at 0.05 level of significance.

CONCLUSION

The mean post test score for pain and fatigue in patients who received progressive muscle relaxation was significantly less progressive muscle relaxation than those patients who did not receive progressive muscle relaxation. So progressive muscle relaxation is effective in reducing chemotherapy induced pain and fatigue among cancer patients. Hence the alternative hypothesis is accepted.

The demographic variables like age, sex, educational status, religion, occupation, income, place of residence, personal habits, type of cancer, duration of illness did not show any association with the level of pain and fatigue among cancer patients receiving chemotherapy.

NURSING IMPLICATIONS

The findings of the study have implications in various areas of nursing education, practice and administration and research.

NURSING EDUCATION

- The oncology nursing students must know the side effects of chemotherapy and the importance of alternative therapies like progressive muscle relaxation, breathing exercise in reducing the side effects of pain and fatigue related to chemotherapy.
- The result of the study may be informative illustration to the students by their nursing teachers.
- Periodic conferences, seminars, workshops and symposiums can be regarding alternative and complimentary therapies to make nursing professionally competent enough to meet over changing needs of society.

NURSING PRACTISE

- Cancer is a dreadful disease and physiological reactions and side effects taking place after the administration of chemotherapy ads to the arranged patient's sufferings. Progressive muscle relaxation has found to be effective in controlling many side effects like insomnia, pain, fatigue, anxiety reduction. This can be taken in account by a nurse to reduce the side effects of the chemotherapy like pain fatigue and anxiety.
- Nurse can manage the chemotherapy related pain and fatigue in an economical and less time consuming way.

- Health promotion is an important function of the nurse and progressive muscle relaxation can be used as health promotion strategy by the nurses.

NURSING ADMINISTRATION

- The nurse administrator should be able to motivate and initiate the health personnel in organising and participating in various educational programmes and improve their knowledge and skills.
- The nurse administrator should act as leader in making the nurses and students nurse and care givers to practise the right way of giving, protect and control illness.
- In service education programme should be organised for nurses to update the knowledge regarding cancer, side effects of chemotherapy and progressive muscle relaxation.

NURSING RESEARCH

- Nursing research is means of expanding the body of knowledge and broadens the scope of nursing. This is possible only if the nurses take initiative in conducting further studies. More research on these areas would be beneficial for patients with cancer undergoing chemotherapy.
- Researches should be done on different aspects of alternative and complementary therapies like progressive muscle relaxation, meditation, guided imaginary to reduce pain and fatigue for cancer patients receiving chemotherapy.
- The health benefits of progressive muscle relaxation can be studied in detail by various nursing researchers.

LIMITATION

- The size of the sample was small to draw generalisation.
- The researcher could not use randomised sampling technique in this study.
- Long term follow up care was not possible due to limited time.

RECOMMENDATION

- A similar study can be conducted with randomization.
- Similar study was conducted for a large group of samples as a long term basis.
- A similar study was conducted with alternative therapies like yoga, meditation to control pain and fatigue.
- A similar study was conducted by using progressive muscle relaxation in reducing anxiety and pain for cancer patients.

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ABSTRACT

Statement of the problem: The Effectiveness of Progressive Muscle Relaxation Technique on the Level of Pain and Fatigue among cancer patients receiving chemotherapy at Ashwin Hospital, Coimbatore. **Study objectives: a)** to access the level of pain and fatigue in cancer patients receiving chemotherapy. **b)** to educate the technique of progressive muscle relaxation exercise in cancer patients receiving chemotherapy**. c)** to re-access the level of pain and fatigue in cancer patients receiving chemotherapy. **d)** to associate the demographic variables with the level of pain and fatigue among the patients receiving chemotherapy. **Methodology:** one group pre test and one post test experimental design .The sample for this study consist of 40 patients who receive chemotherapy from Ashwin hospital Coimbatore, selected by the convenient sampling technique .A Numerical Pain Rating Scale and a Numerical Fatigue Rating Scale was used to assess the level of pain and fatigue in the cancer patients receiving chemotherapy. **Results:** The post test mean score of pain of the experimental group was 1.22 and the post test mean score of the control group was 1.47 .The obtained "t" value for pain was 3.2 and the obtained "t" value for fatigue was 4.26. **Conclusion:** The finding of the study concluded that progressive muscle relaxation showed a significant effect on reducing the level of pain and fatigue among cancer patients receiving chemotherapy.

PPG COLLEGE OF NURSING

(A Unit of P. Perichi Gounder Memorial Charitable Trust)
An ISO 9001 : 2008 Certified Institution
Affiliated to The Tamilnadu Dr. MGR Medical University, Chennai
Recognised by Indian Nursing Council, New Delhi. (Cr. No. : 18-1183/2000, INC Resl. No.172) and Tamilnadu Nursing Council, Chennai.
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✆ : 0422 - 2669000 Fax : 0422 - 2669333 E-mail : ppgcollege@gmail.com **Website : www.ppg.edu.in**

To

Through
The Principal,
PPG College of Nursing
Coimbatore – 35.

Respected Sir/Madam,

Sub: Seeking Permission for conducting research study

I am a student of M.Sc Nursing in PPG College of Nursing. Our College is affiliated to the Tamilnadu Dr.M.G.R Medical University, Chennai. I have taken the specialization in Medical Surgical Nursing

Topic : A STUDY TO ASSESS THE EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION TECHNIQUE ON THE LEVEL OF PAIN AND FATIGUE AMONG CANCER PATIENTS RECEIVING CHEMOTHERAPY AT ASHWIN HOSPITAL, COIMBATORE.

I request you to kindly permit me to conduct my study in hospital. Hope you will consider my requisition and do the needful.

Thanking you,

Date : Yours Sincerely,

Place :

REQUISITION LETTER FOR CONTENT VALIDITY

From

M.Sc (N) II Year,

PPG College of Nursing,

Coimbatore – 35.

To

Through : The Principal ,PPG College of Nursing

Respected Sir/Madam,

Sub : Requisition for expert opinion and suggestion for content validity of tool

I am a student of M.Sc (N) II Year, PPG College of Nursing. Our College is affiliated to the Tamilnadu Dr.M.G.R Medical University, Chennai. As a partial fulfillment of the M.Sc (N) programme. I am conducting.

A STUDY TO ASSES THE EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION TECHNIQUE ON THE LEVEL OF PAIN AND FATIGUE AMONG CANCER PATIENTS RECEIVING CHEMOTHERAPY AT ASHWIN HOSPITAL, COIMBATORE.

Herewith I have enclosed the developed tool for content validity and for the expert opinion and possible solution. It would be very kind of you to return the same as early as possible.

Thanking you,

Yours Faithfully,

PPG COLLEGE OF NURSING

FORMAT FOR THE CONTENT VALIDITY

Name of the expert :

Address :

Total content for the tool :

Kindly validate each tool and tick wherever applicable

S.No	No. of Tool/Section	Strongly Agree	Agree	O.K	Not Applicable	Need Modification	Remarks

Remarks Signature of the expert with date

LIST OF EXPERTS

1.Dr.PADMAJA.,M.D.,
Department of Medicine,
Ashwin Hospital,
Coimbatore.

2.Prof.KUZHANTHAVEL
KMCH College of Nursing,
Coimbatore.

3.Prof. FUELA
Sri Ramakrishna College of Nursing,
Coimbatore.

4.Prof. K.RAJI
Vice Principal,
K.G.College of Nursing,
Coimbatore.

5.Prof. KAVITHA
Vice Principal,
Ganga College of Nursing,
Coimbatore.

6.Prof. B. LAVANYA
Principal,
BRS College of Nursing,
Punjab.

SECTION - A

DEMOGRAPHIC PROFILE

INSTRUCTIONS

Kindly go through the different item of questionnaires carefully and indicate your response by placing a tick mark (✓) on appropriate one.

Sample no: ----------

1. **Age in years**

a) 18-30yrs

b) 31-40yrs

c) 41-50yrs

d) 51-60yrs

e) Above 60 years

2. **Sex**

a) Male

b) Female

3. **Educational Status**

a) Illiterate

b) Primary

c) Secondary

d) Higher secondary

4. **Religion**

a) Hindu

b) Muslim

c) Christian

5. **Occupation**

a) Unemployed /Homemaker

b) Self employed

c) Labourer

d) Office work

6. Monthly income

a) Rs.1500

b) Rs.1501-3000

c) Rs.3001-4500

d) Above Rs.4501

7. Place of Residence

a) Rural

b) Urban

8. **Personal Habits**

a) Smoking

b) Alcoholism

c) Both smoking and alcoholism

d) Chewing tobacco

e) None of above

9. **Types of Cancer**

a) Breast cancer

b) Lung cancer

c) Stomach cancer

d) Others

10. **Duration of Illness**

a) 1-4 months

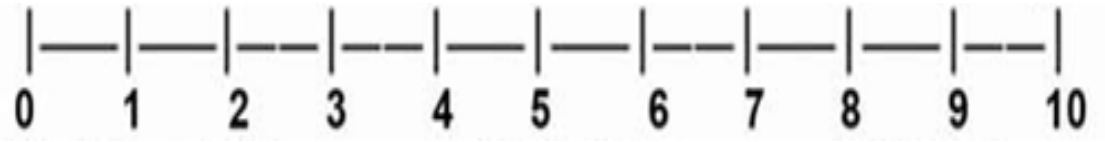
b) 5-8 months

c) 9-12 months

d) Above 12 months

SECTION –B

RATING SCALE FOR PAIN



None Mild Pain Moderate pain Severe Pain

SCORING OF PAIN:

The numerical pain rating scale is displayed as a line numbered from zero to ten.

Scoring,

0 - none

1-3 - mild

4-6 - moderate

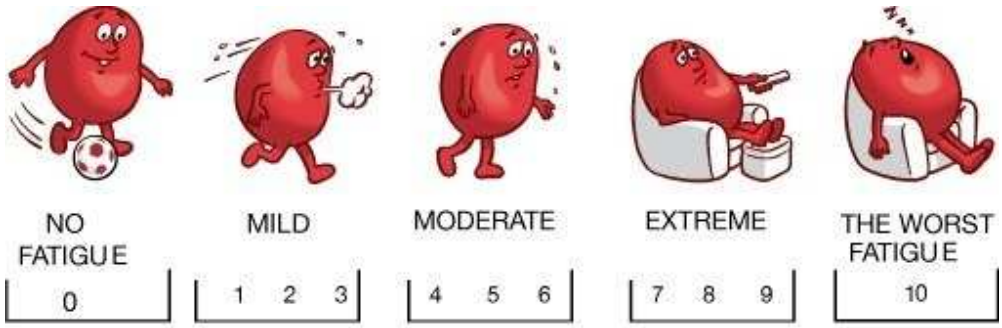
7-10 - severe

The possible maximum score = 10 indicate worst pain

The possible minimum score = 0 indicate no pain

SECTION –C

RATING SCALE FOR FATIGUE



SCORING FOR FATIGUE:

The Sherwin's numerical fatigue rating scale is displayed as a line numbered from zero to ten.

Scoring,

0- no fatigue

1-3 -mild fatigue

4-6 -moderate fatigue

7-9 -extreme fatigue

10 -worst fatigue

The possible maximum score = 10 indicate worst fatigue

The possible minimum score = 0 indicate no fatigue

பகுதி - அ

புள்ளி விபர ஆயுவு

மாதிரி எண்:_____

1) வயது (வருடம்)

அ) 18-30

ஆ) 31-40

இ) 41-50

ஈ) 51-60

உ) 61 வயதிற்கு மேல்

2) பாலினம்

அ) ஆண்

ஆ) பெண்

3) படிப்பு தகுதி

அ) கல்வியறிவில்லை

ஆ) தொடக்க கல்வி

இ) நடுநிலை கல்வி

ஈ) மேல்நிலை கல்வி

உ) பட்டப்படிப்பு

4) மதம்

அ) இந்து

ஆ) இஸ்லாம்

இ) கிறிஸ்துவம்

ஈ) மற்றவர்கள்

5) பணி நிலை

அ) வேலையில்லாமை / குடம்பதலைவி

ஆ) சுயதொழில்

இ) கூலித்தொழில்

ஈ) அலுவலக பணி

6) வருமானம்

அ) 1500 ரூபாய்

ஆ) 1501 – 3000 ரூபாய்

இ) 3001 – 4500 ரூபாய்

ஈ) 4500 ரூபாய்க்கு மேல்

7) தங்கியிருக்கும் இடம்

அ) கிராமம்

ஆ) நகரம்

8) தனிப்பட்ட பழக்கம்

அ) புகைபிடித்தல்

ஆ) மது அருந்துதல்

இ) மேலுள்ள இரண்டும்

ஈ) புகையிலை மெல்லுதல்

உ) எதுவும் இல்லை

9) புற்று நோயின் வகை

அ) மார்பக புற்று நோய்

ஆ) நுரையீரல் புற்று நோய்

இ) வயிற்று புற்று நோய்

ஈ) மற்றவை

10) புற்று நோய் எவ்வளவு நாட்களாக உள்ளது

அ) 1- 4 மாதங்கள்

ஆ) 5 -8 மாதங்கள்

ஈ) 9 -12 மாதங்கள்

உ) மாதங்களுக்கு மேல்

PROTOCOL FOR PROGRESSIVE MUSCLE RELAXATION

INTRODUCTION

Progressive Muscle Relaxation (PMR), or Jacobson's Relaxation Technique or "contract-relax technique", is a systematic technique for achieving a deep state of relaxation. It was developed by Dr. Edmund Jacobson more than 50 years ago. He found that tensing and relaxing various muscle groups throughout the body produces a deep state of relaxation is capable of relieving a variety of condition.

DEFINITION

Progressive Muscle Relaxation is defined as a systematic technique for achieving a deep state of relaxation.

PROCESS

The PMR procedure teaches you to relax muscles through a two-step process. First deliberately apply tension to certain muscle groups, and then stop the tension and turn the attention to noticing how the muscles relax as the tension flows away.

DURATION

One cycle of PMR takes 15 - 20 minutes. Note that each step is really two steps-one cycle of tension-relaxation for each set of opposite muscles. Each tensing is for 10 seconds and each relaxation for 10 – 15 seconds.

BENEFITS

- Decreased heart rate and breathing rate.
- Lowers blood pressure.
- Improves concentration.
- Increased blood flow throughout the body.
- Reduction of stress.
- Increased sense of control over your own emotions and moods.
- Reduces pain perception.
- Reduces nausea and vomiting.

GUIDELINES FOR PRACTICE

- Always practice full PMR in a quiet place, alone, with no electronic distractions, not even background music.
- Remove shoes and wear loose clothing.
- Avoid eating, smoking or drinking. It's best to practice before meals rather than after, for the sake of your digestive processes.
- Never practice after using any intoxicants.
- Sit in a comfortable chair if possible. Client may practice lying down, but this increases the likelihood of falling asleep.

PROGRESSIVE MUSCLE RELAXATION TECHNIQUE

Progressive muscle relaxation involves tensing and relaxing, in succession, sixteen different muscle groups of the body. Client might say to himself “I am relaxing”, “Letting go”, “Let tension flow away”, or any other relaxing phase during each relaxation period between successive muscle groups. Throughout the exercise, maintain focus on muscles .When attention wanders, bring it back to particular muscle group working on. Once comfortably supported in a quiet place, follow the detailed

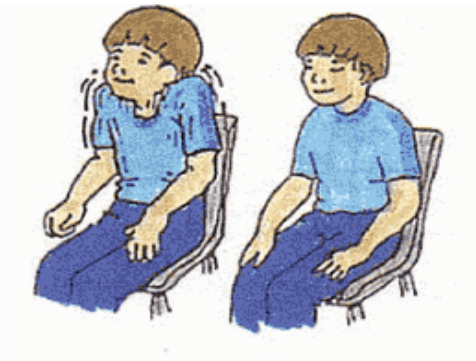
I**nstructions below:**

- **Eyes:** Open them as wide as possible; relax. Close eyes tightly; relax.

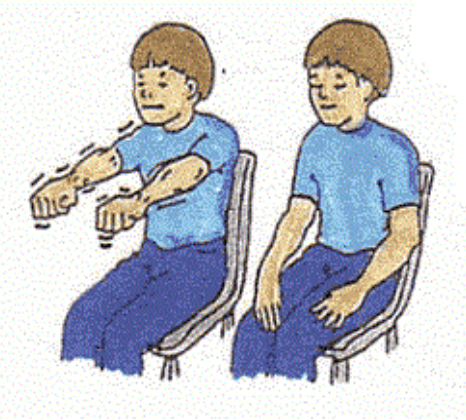
- **Mouth:** The mouth is opened as far as possible; relax. The lips are brought together or pursed as tightly as possible; relaxed.
- **Tongue (**extended and retracted**):** With the mouth open, extend the tongue as far as possible; relax. Bring it back to the throat as far as possible; relax.
- **Tongue (**roof and floor**):** Dig tongue into the floor of the mouth; relax. Dig it the bottom of the mouth; relax.

- **Neck (**lateral**):** With the shoulders straight and relaxed, the head is turned slowly to the right, as far as possible; relax.
- **Neck (**forward**):** Dig chin into chest; relax.
- **Shoulders:** Pull them back; relax them. Push the shoulders forward; relax. Tighten shoulders by raising them up as going to touch ears.

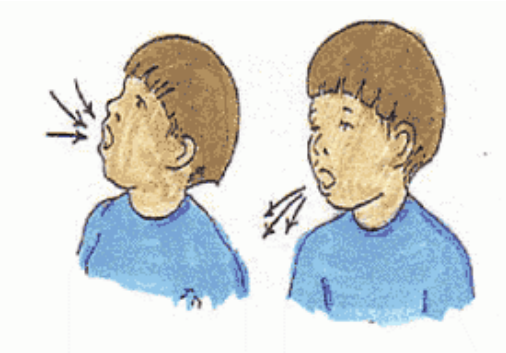
  Hold and then relax.



- **Biceps and triceps:** The biceps are tensed; relaxed. The triceps are tensed; relaxed.
- **Hands:** The fist are tensed, relaxed. The fingers are extended; relaxed.



- **Breathing:** Take as deep a breath as possible; let it out and breathe it out normally for 15 seconds. Let all the breathe in the lung out; inhale and breathe normally for 15 seconds.



- **Stomach:** Pull in the stomach as far as possible; relax completely. Push out the stomach or tense it as if you were preparing for punch in gut; relax.
- **Back:** With shoulders resting on the back of the chair, push body forward so that back is arched; relax.
- **Buttocks:** Tense the buttocks tightly and raise pelvis slightly off chair, relax. Dig buttocks to the chair; relax.
- **Thighs:** Extend legs and raise them about 6th off the floor rest; relax.

  Calves and feet: Point the toes without raising the legs; relax. Point the feet upward as far as possible; relax.

- **Toes:** With the leg relaxed, dig toes in the floor; relax. Bend the toes up as far as possible; relax.
- Now imagine a wave of relaxation slowly spreading throughout body, starting at the head and gradually penetrating every muscle group all the way down to toes.

CONTRAINDICATIONS

Progressive muscle relaxation has few contraindications:

- Intense muscle contraction is a bad idea for anybody experience extreme muscle soreness or recovering from an injury or recent surgery.
- Also, be sure the clients breaths normally throughout. Holding the breath while tensing the muscles causes a temporary spike in blood pressure. This can be dangerous for older people and people with high blood pressure.

CONCLUSION

Progressive muscle relaxation in addition to its health benefits is an excellent tool to help learn about the body and its signals. With practice and time, we can learn to accurately identify tension signals in body and actively work to reduce adverse physical reactions occurring in the body.

A STUDY TO ASSESS THE EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION TECHNIQUE ON THE LEVEL OF PAIN AND FATIGUE AMONG CANCER PATIENTS RECEIVING CHEMOTHERAPY AT ASHWIN HOSPITAL, COIMBATORE.